

Abstract

OPTICAL FIBER AMPLIFIER

- 5 An optical amplifier comprises a doped fiber core and a cladding layer surrounding the core. The mode field diameter of the fiber is greater than $8\text{ }\mu\text{m}$ and the refractive index difference between the core and the cladding layer is selected such that the cut-off wavelength at which the fiber becomes single mode lies in the range 1000-1550nm. This amplifier uses a large mode field diameter fiber, which reduces the intensity for a specified output power. This results in
- 10 reduced filtering of the low frequency components of the signal. The refractive index difference between the core and cladding is selected such that the fiber is multi-mode at 980nm, which enables bend performance to be improved.